### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 99.28

# WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-016294

Address: 333 Burma Road **Date Inspected:** 20-Aug-2010

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC) **Location:** Shanghai, China

**CWI Name:** N/A **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A Yes N/A **Electrode to specification:** No **Weld Procedures Followed:** Yes No N/A N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No **Delayed / Cancelled:** Yes No N/A

34-0006 **Bridge No: Component: OBG** Trial Assembly

### **Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly Areas

Segment 10AE to Segment 10BE (U-Rib to U-Rib)

This QA Inspector performed Dimension Control Inspection for measuring Offset before welding the transverse splice along with ZPMC QC Inspector Mr. Wu Bin on the U-Rib to U-Rib from Cross Beam side towards Bike Path side at a total of 39 locations on Segment 10AE to Segment 10BE between Panel Point (PP) 88 to PP 89 at the following locations:

The offset was measured within 50mm from the Deck Panel on U-Rib on the South and North side. The QA Inspector measured the Offset using 1(One) Meter Straight Edge.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 9DW to 9EW

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This QA Inspector performed Dimension Control Inspection along with ABF QA personnel on the Transverse Splice T-Ribs to T-Ribs for the Segment 9DW to Segment 9EW between Panel Point (PP) 82 to PP 83 at the following locations:

Work Point W6 towards Work Point W4 (Side Panel Cross Beam Side) total 19 T-Ribs.

Work Point W4 towards Work Point W3 (Bottom Panel) total 18 T-Ribs.

Work Point W3 towards Work Point W1 (Side Panel Counter Weight Side) total 19 T-Ribs.

The QA Inspector measured the Vertical Offset using 1(One) Meter Straight Edge and measured the Horizontal Offset on the web using a Bridge Cam gauge.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 9DW to Segment 9EW (Skin Flatness)

This QA Inspector performed Joint Inspection along with ABF QA Inspector to check the Skin Flatness between Segment 9DW to Segment 9EW between Panel Points (PP) 82 and PP 83 at the following locations: The skin flatness was measured on North side (Cross Beam side at B1 and B2 location) and South side (Bike Path side at B3 and B4 location) at 100mm from the weld connecting Bottom Panel to Side Panel using 5000mm string line to verify overall flatness. Straight Edges of 600mm and 630 mm of length was also used to measure the localized flatness.

The skin flatness was measured on North side (Cross Beam side at T1 location) and South side (Bike Path side at T2 location) at 100mm from the weld connecting Deck Panel to Edge Panel using 5000mm string line to verify overall flatness. The Straight Edge of 600mm and 630 mm length was also used to measure the localized flatness.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 9BE to Segment 9CE (Skin Flatness)

This QA Inspector performed Joint Inspection along with ABF QA Inspector to check the Skin Flatness between Segment 9BE to Segment 9CE between Panel Points (PP) 76 and PP 77 at the following locations after repairing the out of tolerance area:

The skin flatness was measured on South side (Bike Path side at B3) Straight Edge 630 mm of length was used to measure the localized flatness and observed within the allowable tolerance.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

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## Suspender Brackets

This Quality Assurance (QA) Inspector verified and measured the gap between the faying surfaces of Deck Panel Corner Assembly to Suspender Bracket (SB) flange at the pre-installation stage along with ZPMC QC Inspector Mr. Shen Jian Bo and observed the gap to be in general compliance with contact requirements. Inspection was performed against the Notification No. 00014 Dated August 20, 2010.

The following Suspender Brackets were inspected.

SB78W installed at Segment 9CW at PP 78, Counter Weight side.

SB84W installed at Segment 9EW at PP 84, Counter Weight side.

The gap measurements were recorded within the allowable tolerance and informed to the Lead Inspector and filled out the inspection notification.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

### **Summary of Conversations:**

No relevant conversations were reported on this date.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Math, Manjunath	Quality Assurance Inspector
Reviewed By:	Peterson,Art	QA Reviewer